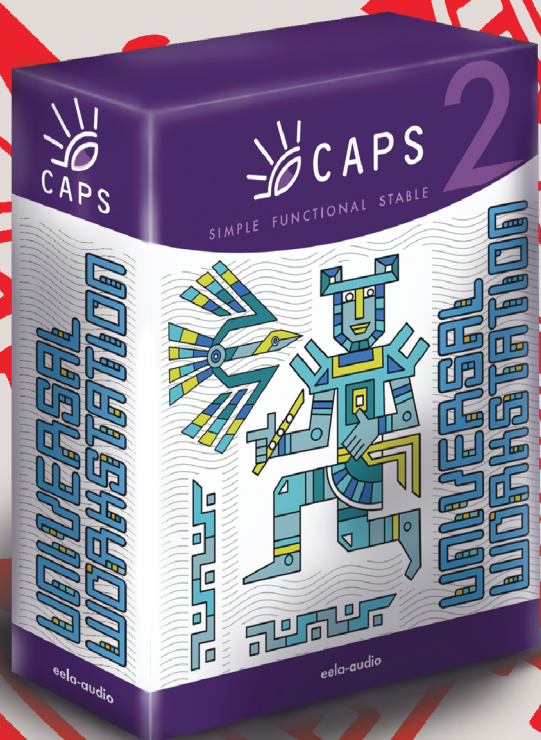


# CAPS 2

**SOFTWARE BOX-PRODUCTS  
FOR RADIO BROADCASTING**

**UNIVERSAL WORKSTATION  
Installation Manual**





# **CAPS 2**

## **Radio Broadcast operating System**

### **Installation and basic Settings Manual for the CAPS 2 System**

Version 2.12 Release 2

March 2008..... Copy - Right:  
.....Trakt Ltd St. Petersburg & R.Barth KG Hamburg



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## **INSTALLATION AND BASIC SETTINGS for the RADIO AUTOMATION SYSTEM CAPS 2**

### **1. Minimal system requirements**

The CAPS 2 software operates under the Microsoft Windows XP operating system (file system NTFS) on Intel-compatible computers. The computer system performance requirements are following:

RAM: + 128 / 256 MB (depending on software configuration of CAPS 2);

HDD: 50 Mb hard disk space are required for installation and start of work. Current requirement are put proceeding from a final software configuration of broadcasting automation CAPS 2;

CPU: they are different for different automation system components. Minimal requirements are the same as for the operating system. It is recommended to use higher figures for work of cueing stations and loggers;

LAN: 100 Mb/s at least;

USB-ports are mandatory;

Keyboard and mouse;

CAPS 2 GUI assumes video resolution of 1024x768 pixels and higher;

Additional software:

Windows Installer 3.0 or later for some steps of the installation procedure;

MS Dot Net 2.0 for the Commercial Box

MS SQL Server for Media DB;

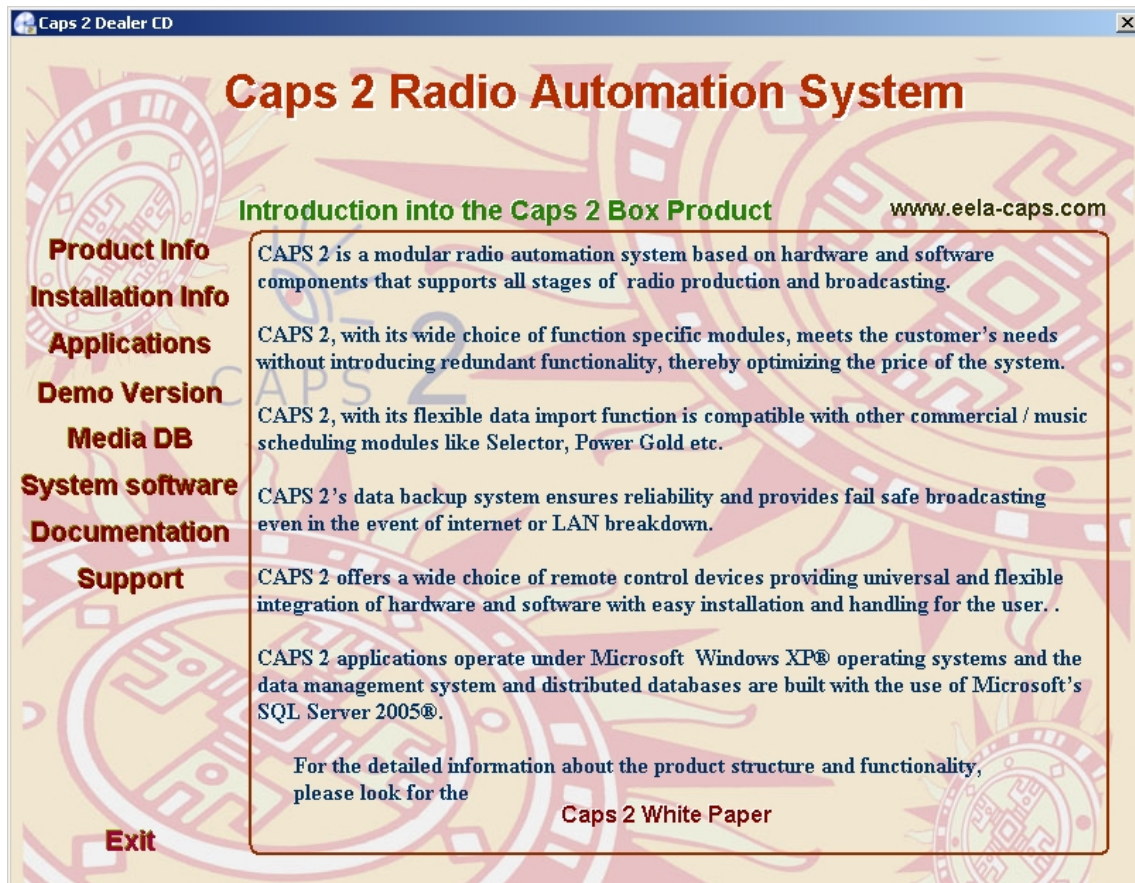
Audio devices drivers should be installed and function properly.

### 2. System installation

If the auto play function of the PC (Personal Computer) the following installation menu will appear.

If not go to the CD directory and click on “autorun.exe”.

In “System software” the necessary versions of Windows installer and Dot Net 2.0 will be available.



MS SQL should be installed as next. Under Media DB an automatic installation procedure in two steps is available.

The Media Database must be installed on one PC only in the network system. For this please read also the “Installation Info” on the CD

After this the installation routine for the CAPS 2 Software can be started in the Menu position “Applications”. During the installation process the driver for the Dongle and the Control Systems will be offered for installation. For later installations of the drivers, they will be available again in the menu position “System Software”.



### 3. Basic settings

The following installation steps are required to set up the radio broadcast system in the stations computer network.

#### 3.1 Settings of Operational System

For normal work you have to provide full access rights for all users of a current computer working with radio applications to folders with installed radio applications (e.g., to the folder **C:\Program Files\CAPS 2\**, if the following applications **CAPS 2 DJIN** and **CAPS 2 BCS Editor** have been installed here) and to the folder **ROOT**. For stable work we also recommend:

At the on-air station do not install antivirus and office packages, or to carefully configure them. Launch of wakened antivirus may block access to hard drive, network resource etc for the radio application. As a result you may experience audio dropouts on air.

Perform planned antivirus check when the station is off air. Antivirus packages should be installed on the server and virus checks should be performed via network. You have to configure antivirus package so, that it will not check files of **\*.blk**, **\*.wav**, **\*.mp3** types.

Prior to installation of updates you have to make a backup of installed software (including folders **SYSTEM** and **ROOT**).

Make sure for correct functioning of main OS subsystems, drivers. Mostly this is referred to the services that may influence PC performance: DMA, BusMastering etc.

Prior to describe configuration of every parameter we would describe the system settings in general. All parameters responsible for proper functioning of application could be divided into 3 groups:

- parameters, global for all working places of the system **CAPS 2**;

- parameters, common for various applications, installed at one workstation (e.g., **CAPS 2 DJIN**, **BCS-Editor**, **Logger** etc);

- parameters, specific for the given application only.

Such division could simplify setting up of the system in general and avoid mistakes, associated with wrong configuration of individual workstations. Starting from version 2.12 you can perform settings either manually or with the help of **Setup wizard**.

#### 3.2 Building up and setting of a system

CAPS 2 system workstations are being built up on the base of various configurations of applications **CAPS 2 DJIN**, **BCS-EDITOR**, **MAG**, **Logger** etc. Thus the very important stage of system setting is integration of all workstations in a single system (connection of every workstation to the system).

Integration is being done by using common information and configuration files, accessible simultaneously to all workstations in the system. For that purpose you have to create a fully shareable folder on the server (read, write operations from every workstation of a system) and you have to specify its full network path in the settings of every copy of application installed in the system. This will be the (**ROOT**) folder. Besides, all workstations of the system are working with a single data base (MDB); and the connection parameters are the same for every workstation and they are stored in global settings in the root folder

Setting of a system could be performed with the help of **Setup wizard**, or manually. Launch of the wizard is initiated automatically during first start of the applications CAPS 2, or with the help of command **Setup wizard** of **Service** (**fig.1**).



Fig. 1. Setup wizard command of Service menu

For building up and setting up the system use **Global settings wizard** (fig. 2) option of the first screen of the wizard and click **Next**.

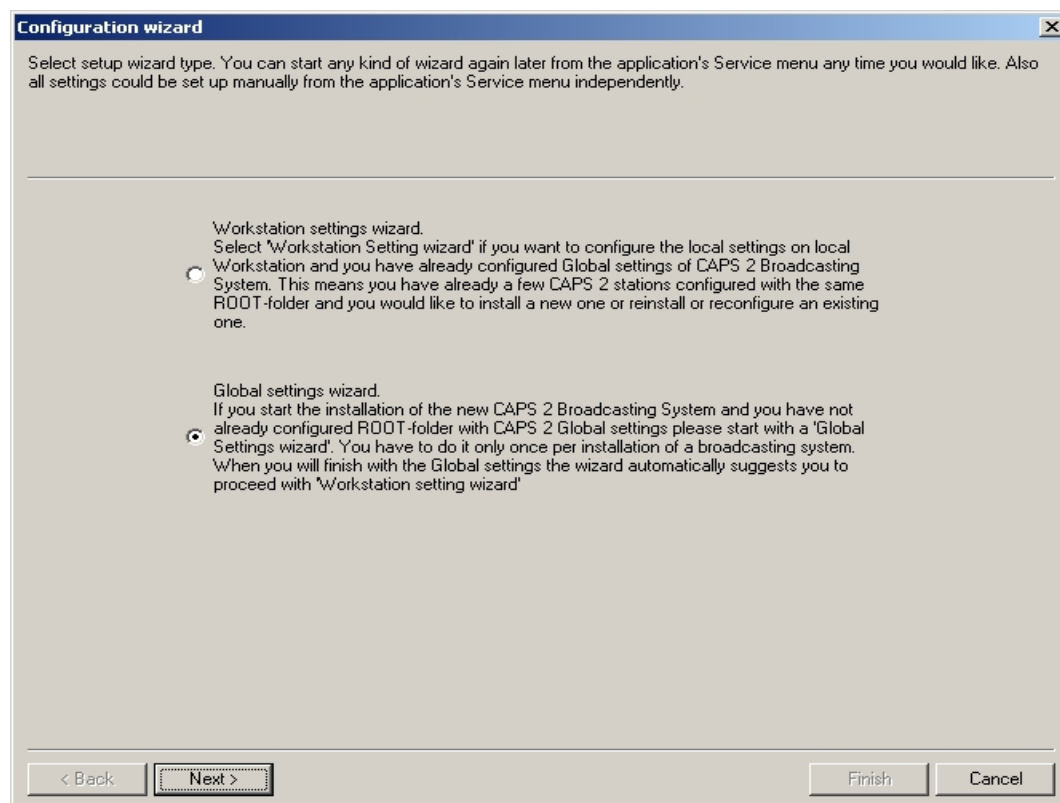


Fig..2. Choosing Global settings wizard.

Path to the root folder should be specified as **Drive:\Folder\Subfolder1\...\ROOT**, if the folder is organized at the local computer or in the UNC format:

**\\ComputerName\RootShare\ROOT-folder** (fig. 3). Setup wizard allows creating this folder (Create) or selecting already existing folder (**Browse**). Using **Check** option you can check existence and availability of the folder. After specifying the path to the root folder click **Next** to proceed.

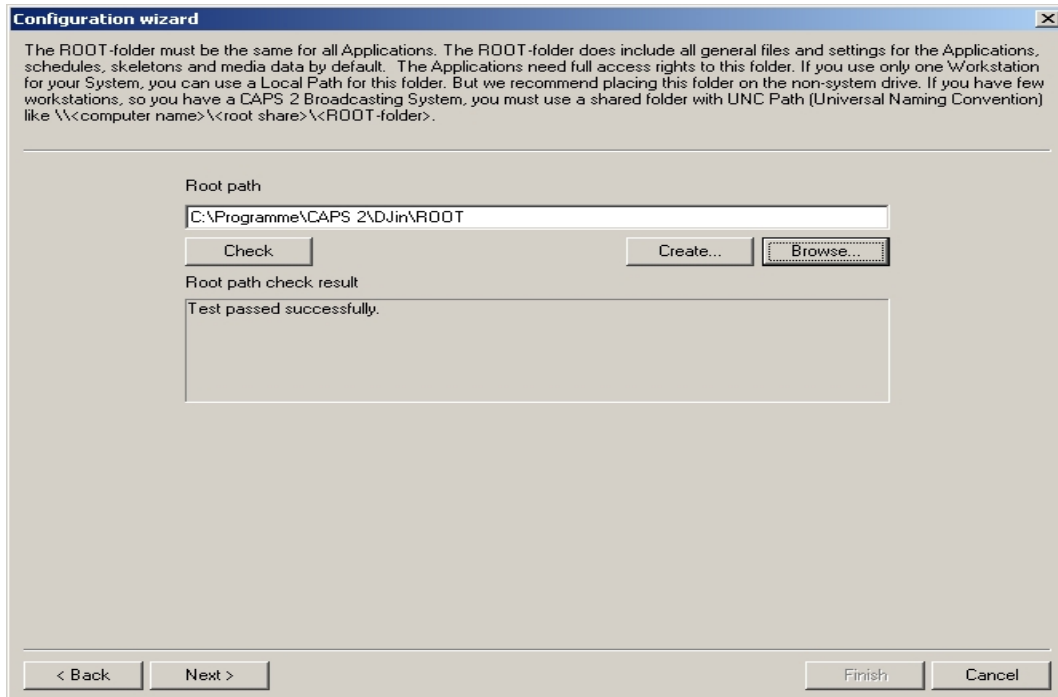


Fig.

### .3. Path to root folder

If you are not using **Setup wizard**, you can specify path to the root folder from the main menu **Service** → **Workstation settings** → **Base settings** → **Root path** (fig. 4).

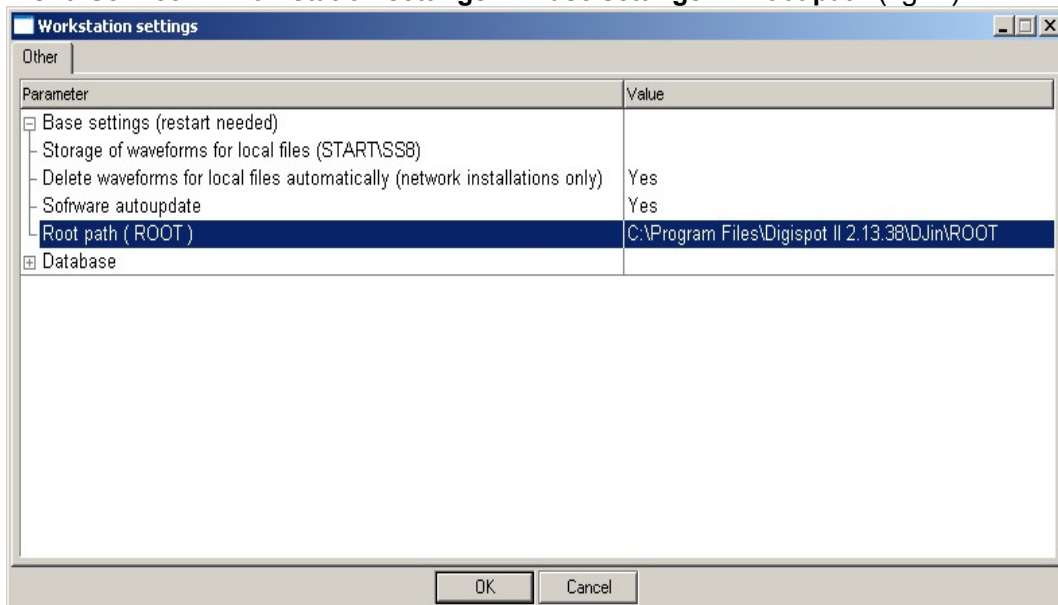


Fig.4. Specifying the path to root folder without Setup wizard

After the first copy of the application gets access to this folder, all necessary files will be created there automatically.

Next thing to do in **Setup wizard** - is to confirm if the data base is present in the system. If it is, you have to specify parameters of access to data base server (fig. 5, 6).

You can find more information about the data base usage in the section 3.5: «Basic settings of applications while working with MDB ».

When working with MDB, you may specify the storage folder for every section of data base and for every category separately (without **Setup wizard** you can make it from main menu **Service** → **Global settings**).

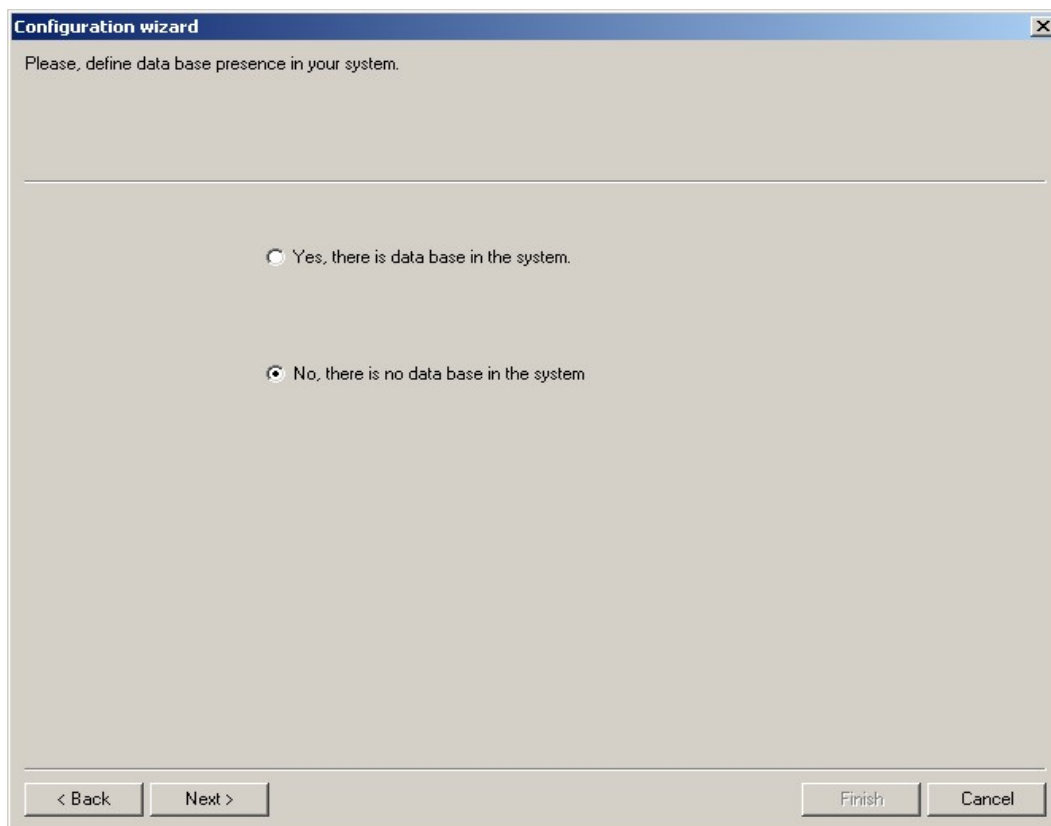
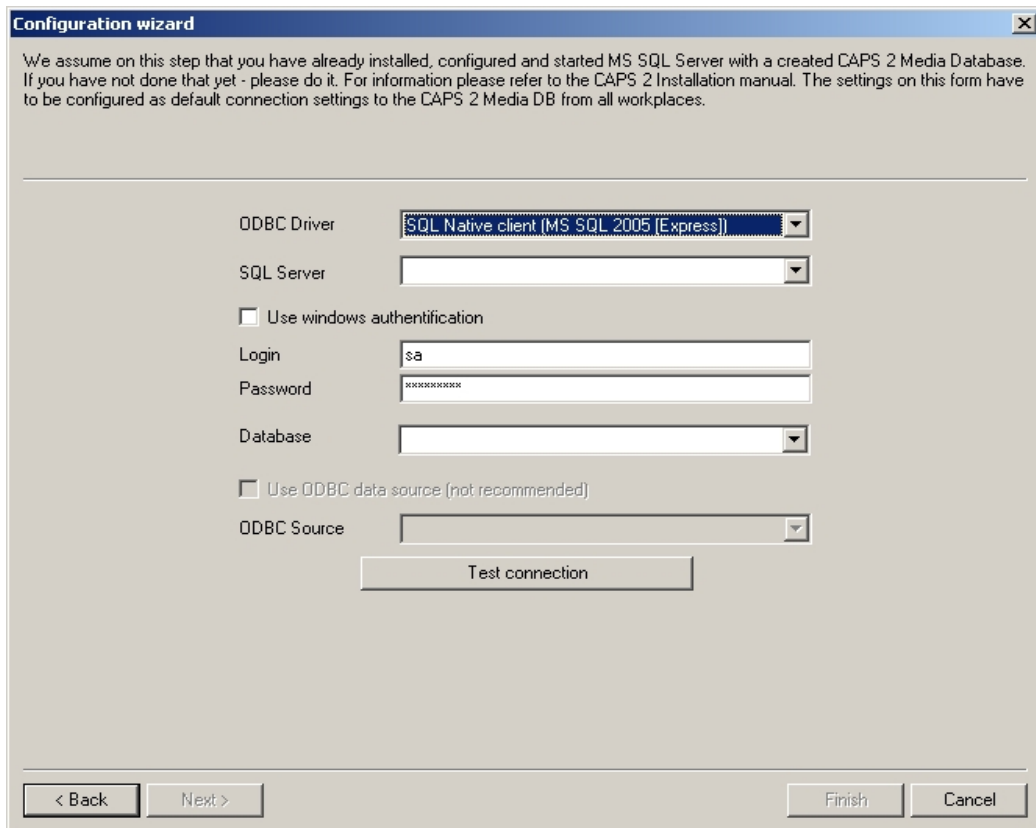


Fig..5. Using data base in the system



**Configuration wizard**

We assume on this step that you have already installed, configured and started MS SQL Server with a created CAPS 2 Media Database. If you have not done that yet - please do it. For information please refer to the CAPS 2 Installation manual. The settings on this form have to be configured as default connection settings to the CAPS 2 Media DB from all workplaces.

ODBC Driver: SQL Native client (MS SQL 2005 [Express])

SQL Server:

☐ Use windows authentication

Login: sa

Password: XXXXXXXXXX

Database:

☐ Use ODBC data source (not recommended)

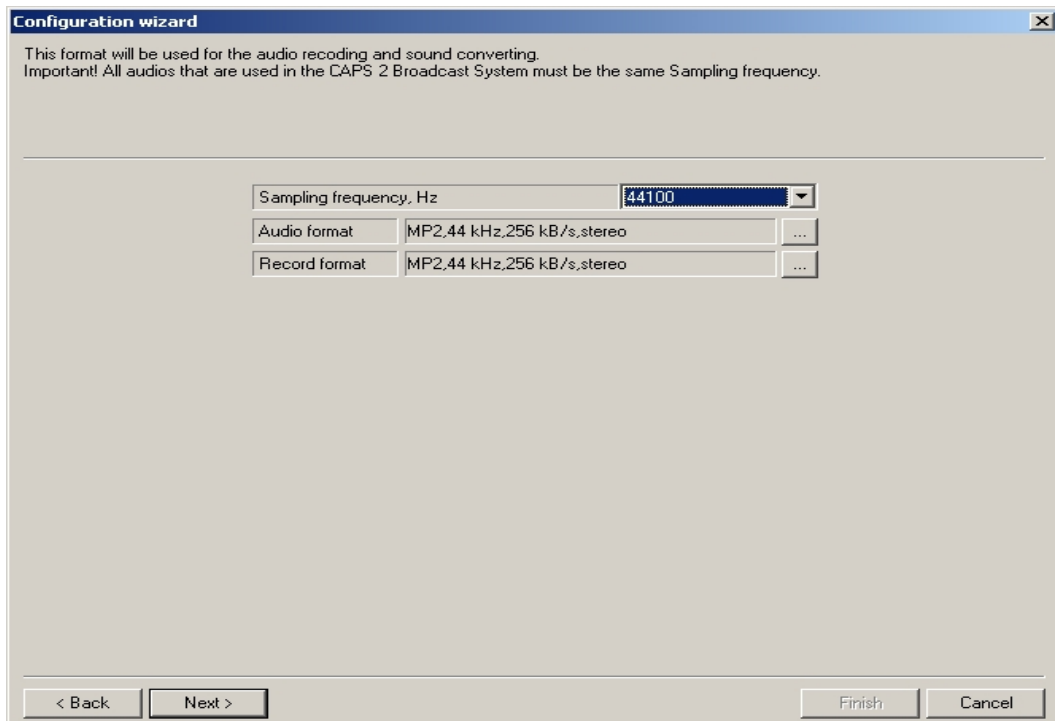
ODBC Source:

Test connection

< Back Next > Finish Cancel

Fig.6. Parameters of access to data base

Then, **Setup wizard** allows selecting format of audio storage, which will be used by default for recording and storing of audio in the CAPS 2 system (fig.7).



**Configuration wizard**

This format will be used for the audio recoding and sound converting.  
Important! All audios that are used in the CAPS 2 Broadcast System must be the same Sampling frequency.

Sampling frequency, Hz: 44100

Audio format: MP2,44 kHz,256 kB/s, stereo ...

Record format: MP2,44 kHz,256 kB/s, stereo ...

< Back Next > Finish Cancel

Fig..7. Choosing audio storage format

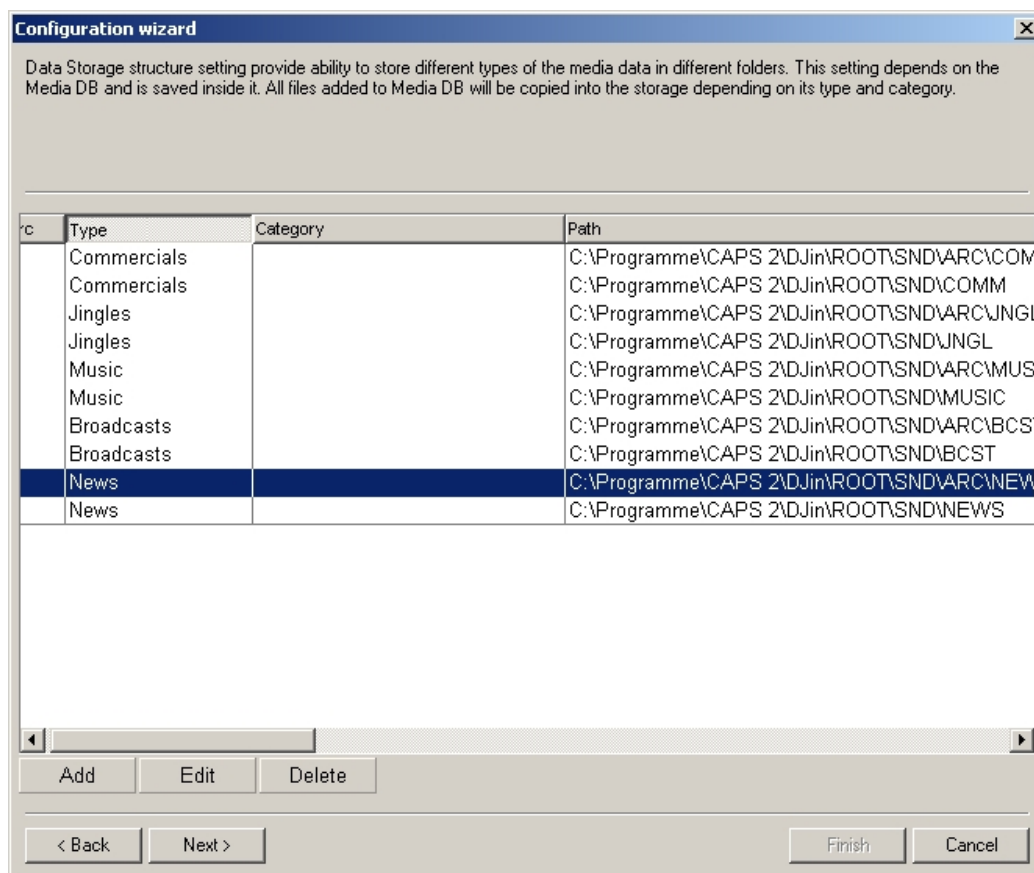


Fig..8. Data Storage Structure

In this template the structure for the data storage in the CAPS 2 System will be determined

On that step the Global settings wizard is finished. Click **Finish** for restart of application or click **Next** to continue setting of the current workstation (workstation settings will be provided in restricted variant without setting of the root folder and DB connection parameters, as soon as they were specified previously). More details about configuring of the workstation are given in sections 3.3: «Settings of DJIN» and 3.4: «Settings of BCS-EDITOR».

We recommend performing configuration of workstation materials storage parameters. Part of audio material, used at the workstation, will be individual, or local. You have to specify appropriate paths: **Storage for editor temporary files** and **Fragments storage directory**. You can set these paths from the main menu **Service Settings Other Base Settings** (fig.9).

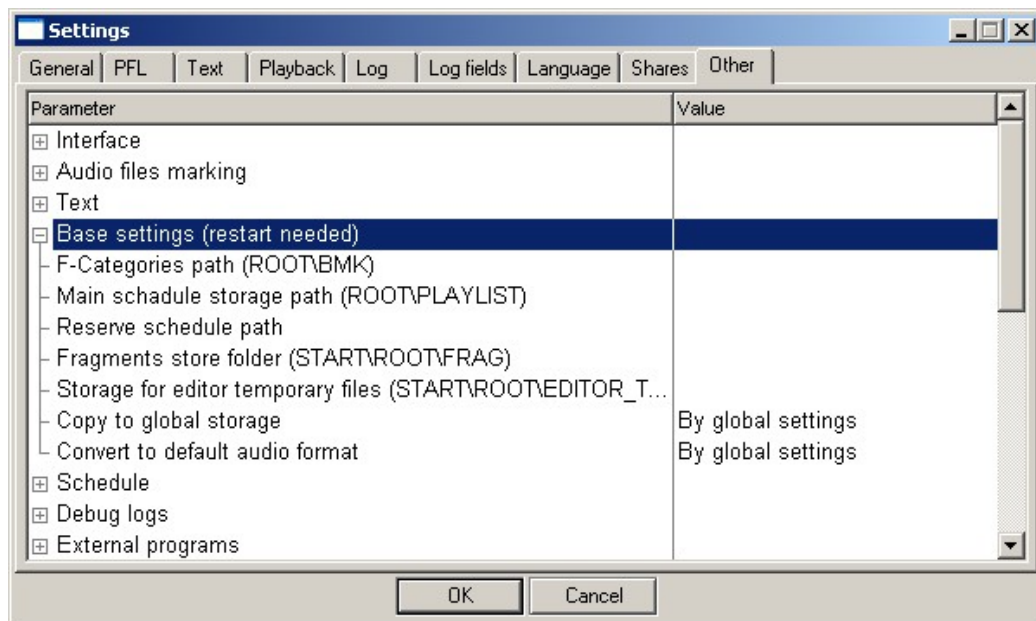


Fig.9. Configuring paths for storage of temporary files and fragments

**Reserve schedule path** – local path to store a copy of schedule for today and tomorrow. In the case of lost access to the main schedule, application keeps running using reserve copy of the schedule, although schedule editing will be prohibited. Other parameters are used for flexible administration and have default settings.

### 3.3 Settings of DJIN application

Basic settings of applications of CAPS 2 system could be also performed with the help of **Setup wizard** (on the first screen of the wizard mark **Workstation settings wizard** – (fig. 10).

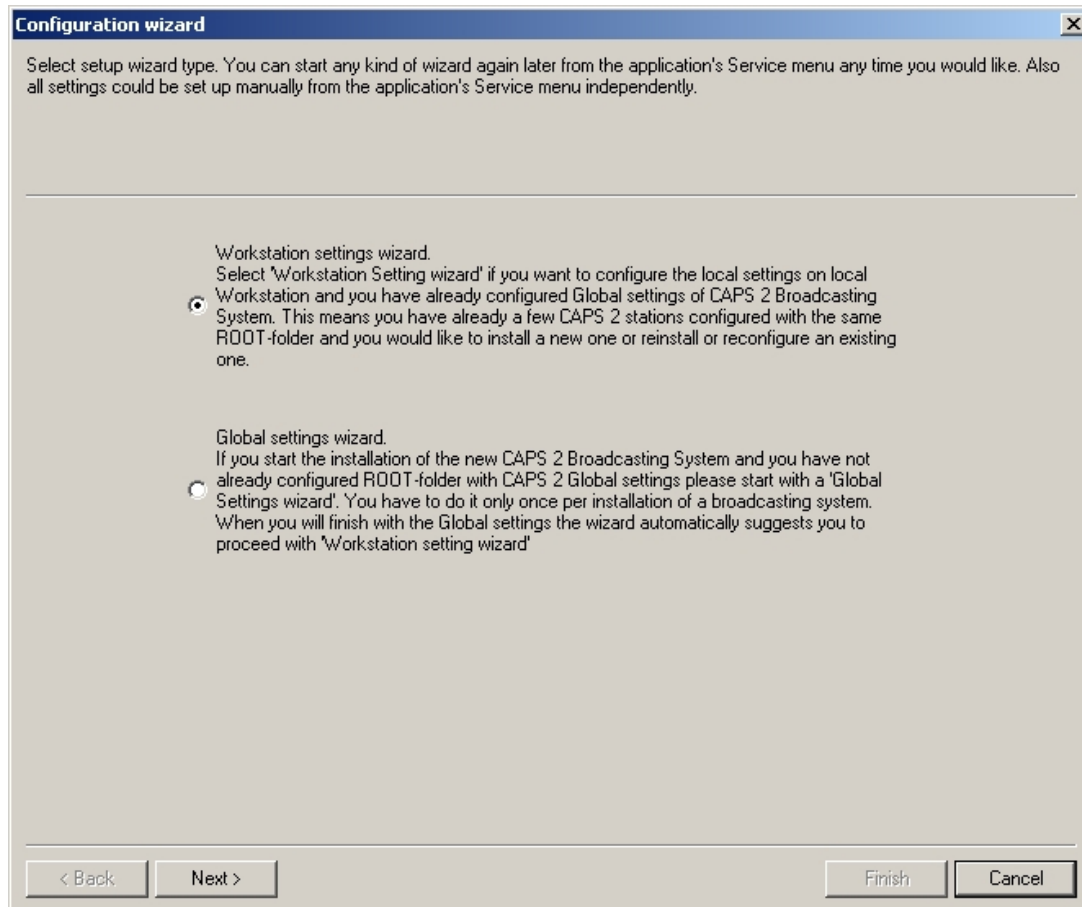


Fig.10. Setting parameters of current workstation



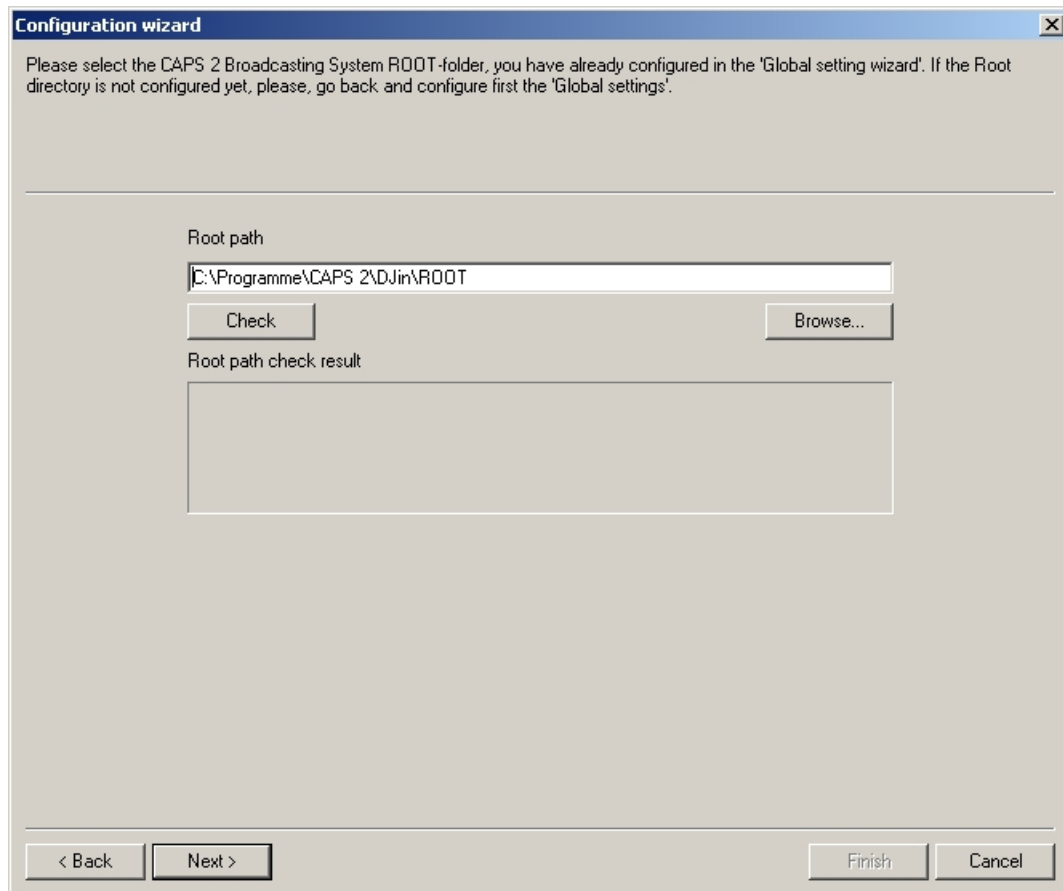


Fig..11. Setting the root path using Setup wizard

### 3.3.1 Base settings

To build up settings of the workstation you have to specify system root folder (you have to specify here the path to the folder which was selected while configuring the system). Using **Check** option you can check accessibility of this folder and the fact that this folder is the root folder of the system.

After that, the wizard suggest to select DB: **Standard Connection to DB**, **Custom Connection to DB** (needs further configuration), **No DB Connection** (fig.12).

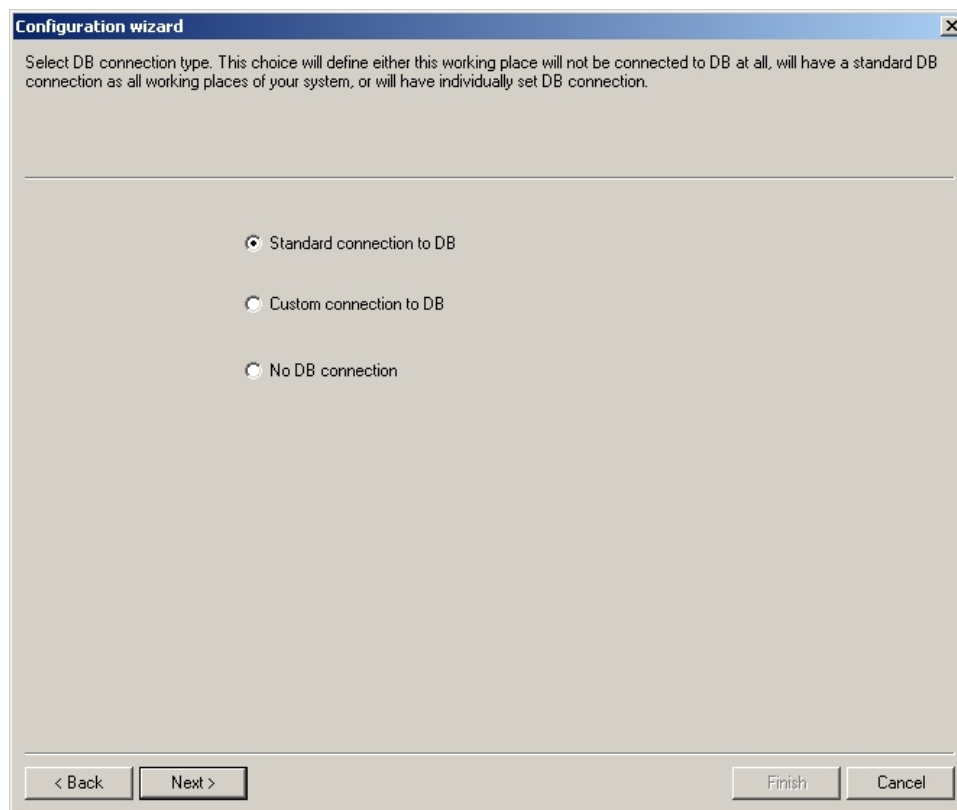
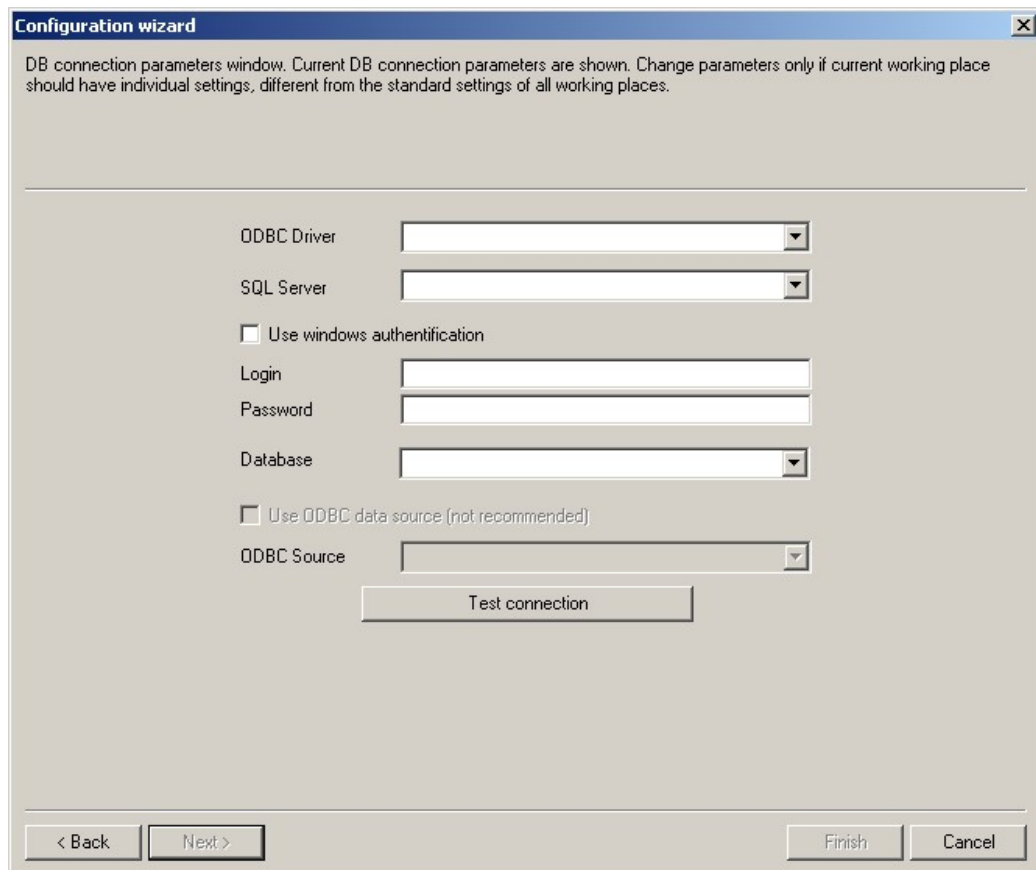


Fig..12. Choice of DB connection type

Depending upon your choice, the wizard will request connection parameters to DB (fig. 12) or will bring you to the next stage of settings. More details about connection to DB you can find in section 3.5: «Basic settings of applications with MDB ».



**Configuration wizard**

DB connection parameters window. Current DB connection parameters are shown. Change parameters only if current working place should have individual settings, different from the standard settings of all working places.

ODBC Driver: [Dropdown]

SQL Server: [Dropdown]

☐ Use windows authentication

Login: [Text Box]

Password: [Text Box]

Database: [Dropdown]

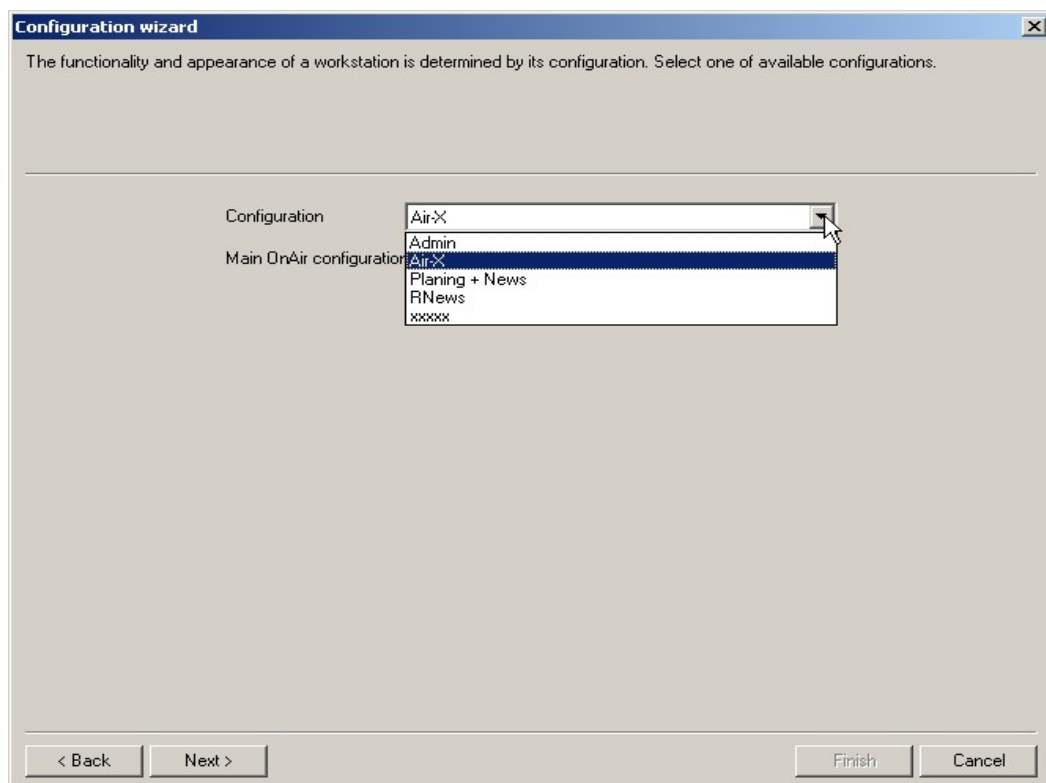
☐ Use ODBC data source (not recommended)

ODBC Source: [Dropdown]

[Test connection]

< Back    Next >    Finish    Cancel

Fig..3. Setting parameters of DB connection



**Configuration wizard**

The functionality and appearance of a workstation is determined by its configuration. Select one of available configurations.

Configuration: [Dropdown]

Main OnAir configuration: [Dropdown]

[List of configurations: Air-X, Admin, Air-X, Planing + News, RNews, xxxxx]

< Back    Next >    Finish    Cancel

Fig..14. Selection of configuration

Next step is selection working configuration (appearance) of application (fig. 14). Without using wizard you can specify this from the main menu **File** :

### Select configuration.

You have to restart application to make the changes active. The wizard will do it automatically prior to continue settings. You can do restart manually from the main menu **File** (restart can be done later).

### 3.3.2 Setting of playback devices

At the first start application will set playback device for each player automatically. If there are several playback devices present, there is a big opportunity that this setting is done incorrectly (conflicts); then you have to check the settings. This could be done either manually or with the help of **Setup wizard**. After restart the wizard will take you to **Playback device settings** (fig.15).

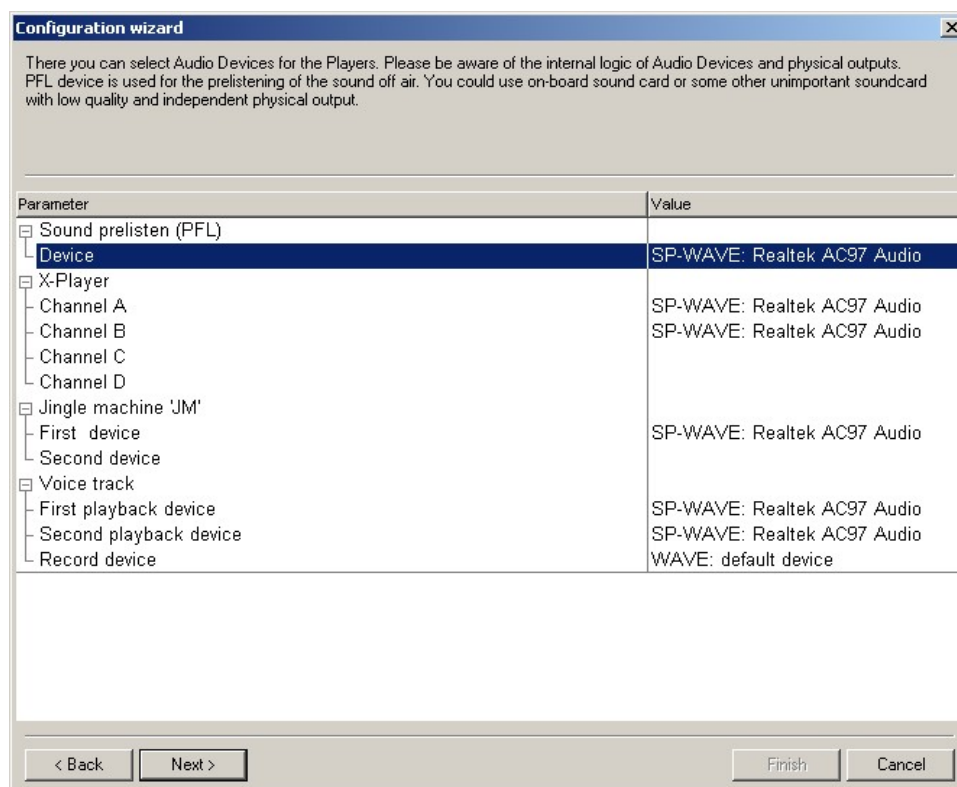


Fig..95. Playback device settings using Setup wizard

Playback device settings highly depend of **DJIN** application configuration.

Below we are giving a list of all modules which use playback devices:

- Main players of the system (X-player or Double player);
- Auxiliary (Block) players;
- Jingle-machine (one device);
- Retransmission module 777 (3 devices);
- PFL (cue) system (one device);
- Subject player at the moderator stripe;
- Clock (one device);
- Logger (each channel requires one device).

Playback device could be chosen from the list of available devices of OS in special settings dialogues, specific for different objects, for all objects except for retransmission module. Such dialogue could be active by right mouse click at the header or body of object

When setting playback devices you have to keep in mind, that often one device could not be used simultaneously by various modules (players).

Often, playback device is paired to appropriate record device; if one is used, another one could not be used. But you can hardly see a situation when all players are used simultaneously. Audio material is delivered by no more than 3-4 players at once. So, practically, 4 playback devices are enough in most cases.

Please note, that in the list of available playback devices you can also find devices with ASIO- and SP- prefixes. ASIO devices appear in case if ASIO driver is loaded. They could be used if ASIO-version of audio driver gives better functionality and better audio quality. If you are using ASIO drivers, you have to check that you are not using WAVE devices simultaneously. It is not allowed to use ASIO and WAVE devices for one audio card simultaneously. SP-device are similar to ASIO devices basically (using small buffers while working with audio cards), but they are less functional and give bigger latency.

You can specify devices without using wizard in the section **Audio Devices** tab **Other** menu **Service – Settings** and tab **Service – Settings – PFL**.

### 3.3.3 Auxiliary settings

After specifying playback devices **Setup wizard** (if used) finish its work.

Besides the performed settings you have to specify audio storage folders.

Use **Global settings** of the main menu **Service**; on the first tab specify parameter **Storage directories**. Here you are setting paths of the main global storage which keeps audio items, added to MDB, and to the **Folders** module.

Open tab **Other** of **Base settings**, and configure parameter **External storage directories** – folders, which contents are defined by operator. Application will not “touch” material stored in these folders (i.e. it is not moving/copying or erasing it). If you add audio item from this folder to MDB, files are not copied and the system is just using link to them.

Parameter of the same group **Copy to global storage** – is a flag, permitting or forbidding moving of audio item to global storage while adding it to the system.

**After the above settings are finished, you have to restart application.**

### 3.3.4 Setting of remote control

Usually setting of remote control is being done by our installation team or implemented inside delivered distributive. Although, there could be a situation when the user has to configure remote control device by himself.

Starting from version 2.4.0, **CAPS 2 DJIN** provides window interface for GPI signals settings, available from player properties. To use older versions of remote controllers you will need specially created configuration files (e.g. usb.cdu).

## 3.4 Basic settings of BCS-EDITOR

Basic settings of **CAPS 2 BCS-EDITOR** assumes connection of it as workstation to the **CAPS 2** system. This procedure is the same for every workstation in the system and was described above. We recommend on finishing specify evidently fragments storage folder (main menu **Service** → **Settings** → **Other** → **Base settings** → **Fragments storage directory**).

### 3.5 Basic settings of applications to work with MDB

To provide working of **CAPS 2** applications with MDB you have to:

- Install Microsoft SQL Server 2000 with SP4 or newer version at the server or on one of system workstations.
- Create new empty Media Data base (MDB) using Enterprise Manager (for SQL Server 2000) or Microsoft Management Studio Express (for Microsoft SQL Server 2005).
- Run on the created base scripts of creation (**mdb\_create.sql**) and updating (**mdb\_update.sql**) of BD structure. You can find scripts in the folder **#Utils\SQL**. Use Query Analyzer for MS SQL 2000 or MS Management Studio Express for MS SQL 2005 to run the scripts.
- Provide access of users to the new MDB.
- In the software settings specify DB server, connection parameters and (login and password for DB access) DB name.

Configuration of access parameters to MDB could be done by **Setup wizard** in the window of standard connection to DB parameters (fig.16).

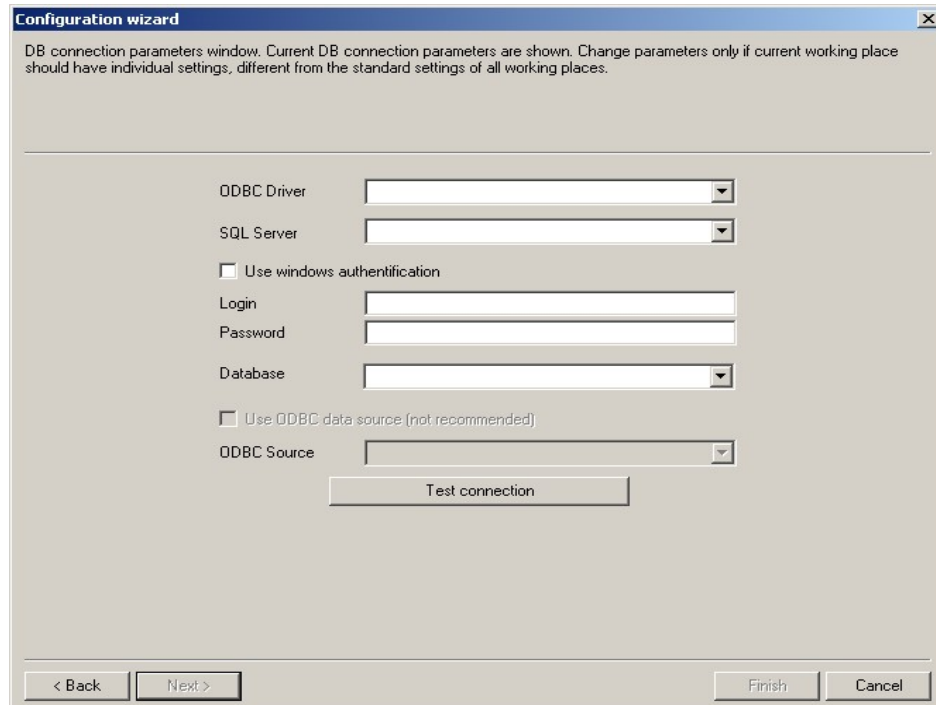


Fig..16. Configuring standard parameters of connection to DB using Setup wizard

## 4. Appendix A. Storing settings

All settings of applications are stored in **INI**. Every executable module (**EXE** file) has dedicated **INI**-file, which stores settings. Auxiliary **INI**-file, keeping global settings for all **EXE**-files in the same folder, defines settings of workstation. All **INI** files and the file **ProfileName.cfg** are stored in the sub catalogue **SYSTEM** of the folder, which keeps **EXE**-file.

*Profile* – is a whole set of **INI** files of applications and their global **INI** file. Every *profile* has a name. Active profile name (**PROFILE\_NAME**) is stored in the file **ProfileName.cfg**. Names of **INI** files are formed by the following way:

**INI**-file, corresponding to **EXE**-file will have a name:

**PROFILE\_NAME.NAME\_EXE\_FILE.INI**;

**INI**-file with workstation settings will be named:

**PROFILE\_NAME. INI**.

File **PROFILE\_NAME\_VERSION.PAR** provides access distribution to the file of workstation setting among applications and stores settings, global for all applications, which are kept in binary format. Editing of this file is not allowed. Editing of **INI**-files is not recommended.

Some settings are global for all computers in the network (**Global settings**). They are stored in the files **ShPar\*.ini** and **ShPar{NNN}.par** (where **NNN** – version number), in the **ROOT** folder.

## 5. Appendix B. Root-folder structure

Root folder keeps global settings and global data, used by all workstations in the system as well as administration parameters.

**BMK**

Meta data storage of internal module **Categories**.

**CASSETTE**

Reserved for the future (for now is not used).

**EDITOR\_TMP**

Storage of temporary files of audio editor.

**FRAG**

Fragments storage.

**IMP\_FORMATS**

Import formats of ASCII schedules storage.

**PATTERN**

Default schedule skeleton.

**PLAYLIST**

Default playlist.

**SND**

Main audio storage.

**SND\_TMP**

Main storage of editable schedule elements.

**SSB**

Main waveform storage.



## 6. Appendix C. Parallel port pinout for remote control

### 2 Fader Start + 2 CUE

Pin	Signal
10	Fader start A (+)
22 (GND)	Fader start A (-)
13	Fader start B (+)
25 (GND)	Fader start B (-)
12	CUE A (+)
24 (GND)	CUE A (-)
15	CUE B (+)
18 (GND)	CUE B (-)

### 4 Fader Start

Pin	Signal
10	Fader start 1 (+)
22 (GND)	Fader start 1 (-)
13	Fader start 2 (+)
25 (GND)	Fader start 2 (-)
12	Fader start 3 (+)
24 (GND)	Fader start 3 (-)
15	Fader start 4 (+)
18 (GND)	Fader start 4 (-)

## 7. Contact information

If any further Information or assistance is needed for the installation procedure or details to the general usage of the CAPS 2 Broadcast system Software application, please send you request to the following e.Mail.

[support@eela-caps.com](mailto:support@eela-caps.com)

The CAPS 2 Support Center will get in contact with you within shortest possible time. Please include in your e.Mail a short and precise description of your request and add your personal e.Mail address.